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First Named Inventor

Bernhard Jahn et al

Art Unit

1771

Examiner Name

Lynda Salvatore

Attorney Docket Number

02/047 ART

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Attorney Docket 02/047

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant	)	Bernhard Jahn et al
Application No.	)	10/646,113
Filed	)	22 August 2003
Title	)	TEXTILE FABRIC AND YARN COMPOSED OF SYNTHETIC FIBERS, PREPARATION THEREOF AND USE THEREOF
Examiner	)	Lynda Salvatore
Art Unit	)	1771

Charlotte, North Carolina  
September 27, 2006

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450 USA

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**AMENDED APPEAL BRIEF**

This Amended Appeal Brief is responsive to the Notification of Non-Complaint Appeal Brief dated September 15, 2006. Appellant inadvertently failed to attach the "Related Proceedings Appendix". It is now submitted with this Response.

This is an appeal from the final rejection of claims 16-19, 30 and 31 issued by the Examiner on March 17, 2006. A Notice of Appeal was filed on June 15, 2006. Appellants availed themselves of the Pre-Appeal Brief review program by filing their request for review with the Notice of Appeal. Appellants were notified by way of a communication entered July 25, 2006, by the Examiner that the appeal needed to proceed to the Board of Patent Appeals and Interferences. This Appeal Brief is submitted under 37 CFR § 41.37 and is accompanied by the Appeal Brief fee of \$500.00.

**REAL PARTY IN INTEREST**

The real party in interest is Invista North America S.á r.l. The application was originally assigned to Arteva Technologies S.á r.l., Talstrasse 80, 8001 Zurich, Switzerland, by appellants which was recorded at Reel 014425, Frame 0349. Arteva Technologies S.á r.l. changed its name to Arteva North America S.á r.l ,which change is recorded at Reel 016057, Frame 0294. Arteva North America S.á r.l subsequently assigned the application to Invista North America S.á r.l. That assignment is recorded at Reel 016074, Frame 0550.

**RELATED APPEALS AND INTERFERENCES**

Upon information and belief, the undersigned Attorney does not believe that there is any appeal or interference that will directly affect, be directly affected by or have a bearing on the Board's decision in this appeal.

**STATUS OF THE CLAIMS**

Claims pending: 1-31

Claims rejected: 16-19, 30 and 31

Claims withdrawn: 1-15 and 20-29

Claims allowed: None

Claims appealed: 16-19, 30 and 31

**STATUS OF THE AMENDMENTS**

Appellants believe that all amendments have been entered.

**SUMMARY OF THE CLAIMED SUBJECT MATTER**

The citations to the specification locations are provided immediately following the elements of claims 16 and 18, the only independent claims on appeal, which are summarized below. However, such citations are provided merely as examples and are not intended to limit the interpretation of the claims or to evidence or create any estoppel.

Claim 16 is directed to yarn composed of synthetic fibers or filaments coated with fluoropolymer. Specification, page 7, lines 4-9. According to claim 16, the yarn is characterized in two ways. *Id.* First, the synthetic fibers or filaments of the yarn of claim 16 are surface fluorinated. Second, any fluoropolymer coating that adhesively joins the individual filaments of the yarn is free of adhesion-promoting constituents. *Id.*

Claim 18 is directed to a fluoropolymer-bonded sewing yarn. According to claim 18, the sewing yarn is also characterized in two ways. Specification, page 7, lines 10-16. First, the surfaces of the synthetic fibers or filaments of which the sewing yarn is composed are fluorinated with gaseous fluorine. *Id.* Second, the fluoropolymer coating which provides a direct elastic and flexible bond between the individual fibers or filaments is free of adhesion-promoting constituents. *Id.*

**GROUND OF REJECTION TO BE REVIEWED**

Claims 16-19, 30 and 31 under 35 U.S.C. § 103(a) as allegedly being obvious over U.S. 4,020,223 (Dixon) in view of U.S. 5,397,629 (Jahn).

**ARGUMENTS**

**REJECTION UNDER 35 U.S.C. § 103(a) BASED UPON DIXON AND JAHN**

Dixon and Jahn do not establish a *prima facie* case of obviousness as they can be combined only on the basis of improper hindsight. If it is considered that Dixon and Jahn do establish a *prima facie* case of obviousness, the specification evidence of non-obviousness is entitled to sufficient weight so as to outweigh the evidence of obviousness.

Prior to presenting specific arguments, appellants point out that it is difficult to provide a detailed rebuttal of the Examiner's rejection as the Examiner has continuously shifted the evidentiary basis of the rejection, especially as it relies upon Jahn, so that it is unclear upon what factual basis the rejection rests. Also, the Examiner has not considered appellants' arguments based upon the specification evidence of non-obviousness. This is legal error on the part of the Examiner. As stated in *In re Hedges*, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986):

If a *prima facie* case is made in the first instance, and if applicant comes forward with reasonable rebuttal, whether buttressed by experiment, prior art references, or argument, the entire merits are to be reweighed. *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

The Examiner's failure to consider the proffered rebuttal evidence is grounds in and of itself for the Board to reverse the Examiner's obviousness rejection.

**1. Separate argument of claim 16**

**a. Dixon and Jahn do not establish a *prima facie* case of obviousness**

Dixon describes the surface fluorination of fiber form synthetic resins selected from the group consisting of polyolefins and polyacrylonitriles treatment. Column, 1, lines 35-43. The surface fluorination of polyolefins and polyacrylonitriles described in Dixon is stated to provide soil release, good water absorption or moisture transport properties. Column 4, lines 39-46. There is no disclosure in Dixon of coating the surface fluorinated polyolefins and polyacrylonitriles with a fluoropolymer. In addition, Dixon makes reference to the natural tendency workers in this field have to “equate treatment of polyolefins, polyamides, polyesters, polyacrylonitriles etc..... Dixon, column 1, lines 17-20. Since the teachings of Dixon are strictly limited to surface fluorinating fibers made from polyolefins and polyacrylonitriles, not to synthetic fibers broadly, it is seen that the stated tendency to equate treatment of polyolefins, polyamides, polyesters, polyacrylonitriles etc does not apply to the Dixon surface fluorination technology. Thus, one of ordinary skill in the art would not extend the teachings of Dixon to the broad class of synthetic fibers.

Jahn describes the use of fluoropolymer coatings on synthetic fibers. Column 2, lines 31-37. Jahn states that that invention involves the use of a first coat (basecoat) of a “fluoropolymer formulation which, in place of conventional adhesion promoters, merely contains an organic compound having a plurality of isocyanate groups. *Id.* The organic compounds having a plurality of isocyanate groups are incorporated into the fluoropolymer basecoat as adhesion promoters. Column 3, lines 19-22. While Jahn describes that invention in terms of “synthetic fibers” broadly, Jahn states a preference for coating polyester, polyamide or aramid synthetic fibers. Column 6, 21-32. Also, the fibers of Jahn are not surface fluorinated.

As mentioned above, the basis of the Examiner’s reliance upon Jahn has shifted significantly throughout the course of the examination of this application since the rejection was first promulgated in the Office action mailed October 7, 2005. This is most notably seen in the

Examiner's reliance upon column 5, lines 29-38, of Jahn for the first time in the portion of the final rejection where the Examiner responded to appellants' arguments. Since the Examiner did not restate the rejection in the final rejection, it is not clear how this portion of Jahn is being relied upon in combination with the teachings of Dixon.

Appellants responded to the final rejection, *inter alia*, by establishing that the newly relied upon portion of Jahn, *i.e.*, column 5, lines 29-38, is a mistranslation of the German priority document. See Plate declaration filed May 3, 2006. At the same time appellants stated there was additional disclosure in Jahn that might be relevant in determining the patentability of claims 16-19, 30 and 31 that the Examiner had not relied upon, *i.e.*, the comparative example portion of Example 3 of Jahn. See response of May 3, 2006, pages 4-6.

The Examiner entered the Plate declaration at page 1, section 10 of the Advisory Action but did not state whether column 5, lines 29-38, of Jahn is still relied upon in support of the rejection. While not clear, it appears the Examiner is relying upon the comparative example portion of Example 3 of Jahn in support of the rejection. See Advisory Action, page 2, fourth paragraph.

Thus, it appears that the Examiner agrees that a person of ordinary skill in the art would not read Jahn as including (as part of the Jahn invention), coating a synthetic fiber by using as a basecoat, a fluoropolymer that is free of adhesion-promoting constituents. This is seen since the only portion of Jahn that suggests that such an embodiment is part of the Jahn invention is the mistranslation that occurs at column 5, lines 29-38. The Examiner entered the Plate declaration that establishes that that portion of Jahn was mistranslated and did not further rely upon column 5, lines 29-38, in discussing the rejection at page 2 of the Advisory Action. Instead, the Examiner appears to have shifted gears and now relies only upon the comparative example portion of Example 3 of Jahn in support of the rejection. Advisory Action, page 2, last paragraph.

Since it is not clear whether the Examiner continues to rely upon the mistranslated portion of Jahn, appellants will respond to the rejection as if both the mistranslated portion of Jahn and the comparative example portion of Example 3 of Jahn are relied upon by the Examiner.

The Examiner's obviousness rejection is based upon impermissible hindsight. "It is well-established that before a conclusion of obviousness may be made based on a combination of references, there must have been a reason, suggestion, or motivation to lead an inventor to combine those references." *Pro-Mold and Tool Co. v. Great Lakes Plastics Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1629-30 (Fed. Cir. 1996). As stated in *In re Kotzab*,

A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. See [In re] *Dembiczak*, 175 F.3d 994 at 999, 50 U.S.P.Q.2D [1614] at 1617 [Fed. Cir. 1999]. Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher." *Id.* (quoting *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 U.S.P.Q. 303, 313 (Fed. Cir. 1983)).

Here, it is believed the Examiner has impermissibly used appellants' disclosure of the claimed invention as a road map in order to combine Dixon and Jahn in an attempt to arrive at the subject matter of claim 16 as the references do not individually or together suggest the yarn set forth in claim 16.

The mistranslated portion of Jahn reads as follows:

It is also possible to prepare fluoropolymer coatings on organic synthetic fibers by using the fluoropolymer formulation according to the invention only to prepare the basecoat and to use for the basecoat or basecoats a normal aqueous fluoropolymer dispersion or paste which is free of isocyanato-containing organic compounds but which, of course, may contain further additives, for example dispersants, wetting agents, pigments, flame-proofing agents or other filling and auxiliary substances.



Jahn, column 5, lines 29-38. As seen, this text states that a “normal” fluoropolymer, *i.e.*, a fluoropolymer that is free of adhesion-promoting constituents, can be used as a basecoat. This statement is so at odds with the disclosure of Jahn’s invention in the other portions of the patent that Jahn’s invention involves the use of a fluoropolymer containing an organic compound that has a plurality of isocyanate groups that an investigation was undertaken to determine how this glaring discrepancy in Jahn’s disclosure occurred. As set forth in Dr. Plate’s declaration, this anomalous statement is a result of a mistranslation that occurred when the German priority document was translated to form the basis of the Jahn U.S. patent application. While it is appreciated that the questioned text in Jahn does say what it says, the statement is so anomalous with the remainder of the disclosure of the Jahn that a person of ordinary skill in the art would question its appearance and accuracy in Jahn. The person of ordinary skill in the art would in similar fashion to Dr. Plate, conduct a straightforward and routine investigation and discover the translation error that occurred. Knowing that that portion of Jahn is a mistranslation and is not part of Jahn’s invention, a person of ordinary skill in the art would attach no significance to that portion of Jahn. Thus, a person of ordinary skill in the art would not find the mistranslated portion of Jahn to be a reason, suggestion or motivation to coat the surface fluorinated polyolefin or polyacrylonitrile fibers of Dixon with a fluoropolymer that is free of adhesion-promoting constituents.

Nor does the comparative example portion of Example 3 of Jahn provide the requisite reason, suggestion or motivation. It is first noted that the working examples of Jahn, that are illustrative of the Jahn invention, always use a fluoropolymer polymer formulation that contains an organic compound having a plurality of isocyanate groups as the *basecoat*. This is in contrast to the requirement of claim 16 that the fluoropolymer coating is free of adhesion-promoting constituents. A so-called normal fluoropolymer is always used as a topcoat, not a basecoat, in the inventive examples of Jahn. It is only in the *comparative example* portion of Example 3 that Jahn describes the use of a “normal” fluoropolymer coating as both a basecoat and a topcoat as follows:

If this example is repeated exactly as described above with a fluoropolymer paste which contains no dicyanato compound but which otherwise has the composition of the paste prepared in Example 1, an adhesive strength of 9.1 daN/5 cm is found on the front of the coated fabric and an adhesive strength of 6.9 daN/5 cm on the back.

Jahn, column 7, lines 56-62.

It should be noted that the adhesive strength values set forth in the comparative example portion of Example 3 are *less* than the adhesive strength values set forth in the inventive example portion of Example 3. Since the relevant disclosure of Jahn appears in a comparative example, that disclosure must be read in that context, which is a restrictive context. A person of ordinary skill in the art would view the comparative example disclosure as a single isolated fact that is divorced from the disclosure of Jahn's invention which involves basecoats of fluoropolymers that contain organic compounds having a plurality of isocyanate groups. A person of ordinary skill in the art would not view the comparative example portion of Example 3 of Jahn as a basis to conclude that it would have been obvious to coat the surface fluorinated polyolefin or polyacrylonitrile fibers of Dixon with a fluoropolymer that does not contain adhesion-promoting constituents.

Apart from the status of this relevant disclosure being a comparative example, not an inventive example, there is another reason why the comparative example portion of Example 3 of Jahn does not provide the requisite reason, suggestion or motivation. As previously discussed, Dixon describes surface fluorinated polyolefin or polyacrylonitrile fibers but does not teach that those fluorinated fibers be coated with a fluoropolymer. Since Dixon does not teach that the surface fluorinated polyolefin or polyacrylonitrile fibers of that invention should be coated with any fluoropolymer, the question becomes where is there a reason, suggestion or motivation to coat the fluorinated polyolefin or polyacrylonitrile fibers of Dixon with a fluoropolymer that is free of adhesion-promoting constituents as required by claim 16? Jahn does not suggest such a step since the fibers used in the Jahn invention are *not* surface fluorinated. The comparative example portion of Example 3 of Jahn treats a fabric composed of polyester fibers, not polyolefin or polyacrylonitrile fibers as used in Dixon. Thus, viewing the relevant disclosure of Jahn, the comparative example portion of Example 3 that is limited to coating polyester fibers, in light of

Dixon, keeping in mind the cautionary note of Dixon of equating treatment of polyolefin, polyacrylonitrile and polyester fibers it is seen that the comparative example treatment of polyester fibers would be extended to treating polyolefin and polyacrylonitrile fibers. Since the references relied upon as evidence in the obviousness rejection do not suggest their combination, it appears that the only reason to combine the references in the manner proposed by the Examiner is appellants' disclosure of the present invention. Thus, the obviousness rejection should be reversed as it is based upon impermissible hindsight.

**b. Specification evidence of non-obviousness**

If it is determined that Dixon and Jahn establish a *prima facie* case obviousness against the subject matter of claim 16, the evidence of non-obviousness must be considered as a rebuttal. Even though arguments based upon this evidence have been made in appellants' response of March 17, 2006, and the Pre-Appeal Brief Request for Review, to date, the Examiner has not considered the evidence. Consistent with the rule that all evidence of nonobviousness must be considered when assessing patentability, the PTO must consider comparative data in the specification in determining whether the claimed invention provides unexpected results. *In re Margolis*, 785 F.2d 1029, 1031, 228 U.S.P.Q. 940, 941-42 (Fed. Cir. 1986). As explained above, the failure to consider the specification evidence is legal error on the part of the Examiner.

The specification evidence of non-obviousness is straightforward and readily understood. As explained:

[I]n order to make composite materials based on fluoropolymer-treated synthetic fibers suitable for a wide range of applications, for example the manufacture of membranes for textile building construction, flexible containers, conveyor belts and fabric tubes, it is absolutely necessary that the fluoropolymer should possess adequate adhesion to the synthetic fiber. Adhesion or adhesive strength is here to be understood as meaning the resistance to separation of base material and coating for a 5 cm wide strip as determined in line with German standard specification DIN 53530. Adequate performance capability

of the composite is ensured when, depending on the planned application, adhesion values from 100 to 150 N/5 cm are achieved. There are some applications where it is even desirable to have adhesion values of more than 200 N/5 cm.

Specification, page 3.

Prior to the present invention it was necessary to include adhesion-promoting constituents such as organic compounds that contain a plurality of isocyanate groups in fluoropolymer coatings of synthetic fibers in order to achieve adequate adhesion between the synthetic fiber and the fluoropolymer coating. See Jahn, column 2, lines 10-37. The present invention is based upon the discovery that yarns comprised of surface fluorinated synthetic fibers or filaments can be coated with fluoropolymer coatings that do not contain adhesion promoting constituents and will have adequate adhesion values. Nothing in Dixon and Jahn would have allowed one of ordinary skill in the art to predict this outcome.

Reference is made to Tables 1-3 and Figures 1 and 2 of the specification that set forth data obtained from treatment of three different polyester fiber types with either surface fluorination alone or surface fluorination and a coating of a fluoropolymer that does not contain adhesion promoting constituents. As seen, the provision of a fluoropolymer coating that does not contain adhesion promoting constituents consistently improved the front and back adhesion values of the surface fluorinated fibers to an acceptable level of at least 100 to 150 N/5 cm.

The comparative example portion of Example 3 of Jahn is useful to put the results obtained through use of the present invention in proper perspective. As seen, the use of a fluoropolymer coating on a polyester fiber that was not subjected to surface fluorination, results in adhesive values of 9.1 daN/5 cm (91 N/5 cm) on the front of the sample and 6.9 daN/5 cm (69 N/ cm) on the back of the sample. Jahn, column 7, lines 56-62. As explained above, these relatively low values mean that composite products made from such coated fibers have limited use. This is in contrast to the higher adhesive values obtained from following the teachings of the present invention as documented in Tables 1-3 of the specification. Thus, composite

materials made from the coated yarns of claim 16 will be useful in a wider variety of products than the prior art fibers.

The strength of any perceived *prima facie* case of obviousness is weak since the evidence of obviousness relied upon in the rejection, Dixon and Jahn, is entitled to little weight for the reasons set forth above explaining why these references are not combinable. In contrast, the specification evidence of non-obviousness is entitled to substantially greater weight given the demonstrated improvement in adhesive values over fibers that are only surface fluorinated (Dixon) and fibers that are only coated with a fluoropolymer that does not contain adhesion-promoting constituents (Jahn, comparative example portion of Example 3). Weighing the evidence of obviousness against the evidence of non-obviousness, it is clear that the greater weight of evidence compels a conclusion that the subject matter of claim 16 would not have been obvious to a person of ordinary skill in the art.

**c. Response to Examiner's comments**

Since the Examiner has not favored the record with a complete statement of the rejection that explains in any detail what portions of Jahn are relied upon and how Jahn is to be combined with Dixon, it is difficult to respond to the Examiner's reasoning. Also, the Examiner has not acknowledged or commented upon the specification evidence of non-obviousness. Thus, appellants can only respond to the various comments the Examiner has made in response to appellants' detailed arguments.

The Examiner states at paragraph 2 of page 2 of the Advisory Action that the motivation for coating the fluorinated fibers of Dixon with a normal fluoropolymer is found in Jahn's disclosure that coated fibers have high slip and chemical resistant characteristics. In response, it is noted that the portions of Jahn referred to by the Examiner in this regard are directed to describing the inventive coated fibers of Jahn that are coated with a fluoropolymer that contains organic compounds having a plurality of isocyanate groups. If Jahn is relevant to the present invention, it is only from the limited disclosure therein of the comparative example portion of

Example 3. The properties described in Jahn the Examiner relies upon to establish the requisite reason, suggestion or motivation are attributable to fibers coated according to Jahn's invention that have adhesion-promoting constituents, not the coated fibers of the comparative example that do not use adhesion-promoting constituents. Thus, the Examiner's comment is misdirected.

Furthermore, the Examiner's focus on the enumerated properties to the exclusion of the improved adhesive strength demonstrated to be possessed by yarns according to claim 16 is error. "Evidence that a compound is unexpectedly superior in one of a spectrum of common properties . . . can be enough to rebut a *prima facie* case of obviousness." *In re Chupp*, 816 F.2d 643, 646, 2 USPQ2d 1437, 1439 (Fed. Cir. 1987).

The Examiner states that a person of ordinary skill in the art would recognize that further coating the surface fluorinated fibers of Dixon with the "normal fluoropolymer of Jahn would result in a fiber having the combination of high slip, chemical resistance, soil repellency and absorbitivity properties." Advisory Action, page 2, paragraph 2. First, the invention of Jahn does not involve so-called normal fluoropolymer coatings. Rather, the Jahn invention involves fluoropolymer coatings that contain organic compounds having a plurality of isocyanate groups. The only statement in Jahn that suggests a "normal" fluoropolymer coating is part of the Jahn invention has been established to be a mistranslation and would be recognized as such by a person of ordinary skill in the art from reading the reference in its entirety. Second, the comparative portion of Example 3 of Jahn does not attribute any of the properties listed by the Examiner in this comment to the use of the normal fluoropolymer. The Examiner is misconstruing Jahn.

The Examiner states that "[t]here is nothing on record to evidence that the fluoropolymer coating of Jahn could not be used to coat another type of synthetic fiber such as those taught by Dixon ...." Advisory Action, page 2, third paragraph. First, that one "could" perform an act does not mean that that act would have been obvious under 35 U.S.C. § 103(a). *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). Second, it is the Examiner's initial burden to establish that the subject matter of the claims as a whole would have been obvious to a

person of ordinary skill in the art, 35 U.S.C. § 103(a), not appellants' burden to establish that something "could not be used" as stated in the Advisory Action.

The Examiner also states that "it is irrelevant as to whether the normal fluoropolymer coating is used as the basecoat, topcoat or both [since] Jahn was relied upon to evidence that it is known in the art to coat synthetic fibers with a fluoropolymer coating which is free of isocyanates (i.e., normal fluoropolymer)." Advisory Action, page 2, paragraph 4. The Examiner does not cite to Jahn in support of this statement. As established above, the portion of Jahn at column 5, lines 29-38 is a mistranslation that, when read in proper context as a person of ordinary skill in the art would, does not support the Examiner's assertion. It may be that this comment from the Examiner is meant to refer to the comparative example portion of Example 3 of Jahn. If so, this portion of Jahn does not provide the sweeping evidence that the Examiner seems to believe due to its status as a comparative example.

The Examiner states that while the adhesive strength values obtained in the comparative example portion are not as strong as when the inventive coating of Jahn was used, "there is nothing of record to evidence that the normal fluoropolymer coating is not suitable for the claimed intended use." Advisory Action, page 2, paragraph 4. The Examiner's statement once again puts the cart before the horse. It is the Examiner's initial burden to establish a *prima facie* case of obviousness. *In re Piasecki, supra*. As explained above, the enhanced adhesion values obtained when the teachings of the present invention are followed allow the treated yarns of claim 16 to be used in a wider variety of products. Nothing in Dixon and Jahn provide a basis to conclude that the values obtained according to the present invention would have been obvious to a person of ordinary skill in the art.

## **2. Claims 17, 30 and 31**

For the purposes of this appeal only, claims 17, 30 and 31 will not be separately argued. Thus, they stand or fall based on claim 16.

**3. Separate argument of claim 18**

Claim 18 is directed to a fluoropolymer bonded sewing yarn where the fibers or filaments of the yarn are surface fluorinated and the fluoropolymer coating is free of adhesion-promoting constituents.

**a. Dixon and Jahn do not establish a *prima facie* case of obviousness**

The arguments made above in section 1. a. in regard to the rejection of claim 16 are incorporated by reference herein. For those reasons, Dixon and Jahn do not establish a *prima facie* case of obviousness.

**b. Specification evidence of non-obviousness**

The arguments made in section 1. b. in regard to the rejection of claim 16 are incorporated by reference herein. In addition, the example set forth on pages 21-22 of the specification (Bonding of a sewing yarn) must be considered in determining the patentability of claim 18. As set forth in this example, a sewing yarn produced according to the present invention “permits on average 4000 stitches without broken end, while an unbonded thread permits on average only about 300 stitches without breaking.” Specification, page 21.

The strength of any *prima facie* case of obviousness is weak. The evidence of obviousness relied upon in the rejection, Dixon and Jahn, is entitled to little weight for the reasons set forth above explaining why these references are not combinable. In contrast, the specification evidence of non-obviousness relied upon above is entitled to substantially greater weight given the demonstrated improvement in adhesion values over fibers that are just surface fluorinated (Dixon) and fibers that are just coated with a fluoropolymer that does not contain adhesion-promoting constituents (Jahn, comparative example portion of Example 3). Weighing the evidence of obviousness against the evidence of non-obviousness, it is clear that the greater



weight of evidence compels a conclusion that the subject matter of claim 18 would not have been obvious to a person of ordinary skill in the art.

4. Claim 19

For the purposes of this appeal only, claim 19 will not be separately argued. Thus, claim 19 stands or falls based on claim 18.

CONCLUSION

Dixon and Jahn do not establish a *prima facie* case of obviousness. If it is considered that a *prima facie* case of obviousness does exist, the specification evidence of nonobviousness is entitled to sufficient weight to outweigh the evidence of obviousness relied upon by the Examiner and, thus, provide an adequate rebuttal. The Board is requested to reverse all rejections of record.

Respectfully submitted,



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GNC/nb

**CLAIMS APPENDIX**

16. Yarn composed of synthetic fibers or filaments coated with fluoropolymer, characterized in that the synthetic fibers or filaments are surface fluorinated and in that any fluoropolymer coating adhesively joins the individual filaments of the yarn and is free of adhesion-promoting constituents.

17. Yarn as claimed in claim 16, characterized in that the fluoropolymer coating has an adhesive strength such that exposure to mechanical stresses of the kind occurring in the further processing of yarn from the fibers or filaments leaves the fluoropolymer coating adherent and defect free.

18. Fluoropolymer-bonded sewing yarn, characterized in that the surfaces of the synthetic fibers or filaments of which the sewing yarn is composed are fluorinated with gaseous fluorine and in that the fluoropolymer coating which provides a direct elastic and flexible bond between the individual fibers or filaments is free of adhesion-promoting constituents.

19. Sewing yarn as claimed in claim 18, characterized in that the bonding fluoropolymer coating has an adhesive strength such that exposure to mechanical stresses as occur in the course of sewing leave the fluoropolymer coating undetached from the synthetic fibers or filaments.

30. The yarn of claim 16 forming flexible containers, compensators, bellows, awnings, tents, air-houses, membranes, conveyor belts, fabric tubes, transportation systems.

31. The yarn of claim 16 textile fabrics, wovens, formed-loop knits, nonwoven scrims, nonwovens, layered products formed from identical or different textile sheet materials.

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**EVIDENCE APPENDIX**

A copy of the declaration under 37 CFR § 1.132 by Dr. Jürgen Plate received by the USPTO on May 3, 2006, is attached. The Examiner entered the declaration into the record in the Advisory Action, mailed June 1, 2006.

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**RELATED PROCEEDINGS APPENDIX**

None.